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Title: Detection Of Shock-heated Gas Using The Sz Effect In Rxj1347-1145

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Publication: American Astronomical Society, AAS Meeting #215, #364.06; Bulletin of the American Astronomical Society, Vol. 42, p.553

Publication Date: 01/2010

Origin: [AAS](#)

Bibliographic Code: [2010AAS...21536406M](#)

Abstract

Using the MUSTANG 3.3 mm bolometer array on the GBT we have measured the Sunyaev-Zel'dovich Effect (SZE) in the most x-ray luminous cluster known, RXJ1347-1145 ($z=0.45$) at a resolution of 10" (fwhm). This is the highest resolution image of the SZE to date and confirms previous indications of a localized departure from pressure equilibrium in the form of a small, very hot (>0 keV) parcel of gas, presumably resulting from a merger shock. We discuss the measurements, their interpretation, and future work.
